MARINE REVIEW.

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The Hull Tariff for 1891.

Below is printed the lake hull tariff for 1891. It contains no sweeping changes from last year but, as usual, is somewhat to the advantage of the underwriters and practically bars the low grade lumber carriers from insuring at all. Last season the different companies were permitted to make special rates on B vessels, and some vessels of this class managed to secure insurance that would leave a meager margin for themselves, but with rates fixed at 11 to 14 per cent. it is difficult to conceive how they will engage in business of any kind. Even on A 2½ sailing vessels, the rates are 9, 10 and 12 per cent. Perhaps the most important features of the new tariff is the separation of A 1 and A 1½ vessels which have been classed together in past seasons, and with this separation an increase of about ¼ of 1 per cent. on the new A 1½ class. In addition to this the insurance on B 1 vessels is limited to two-thirds of their valuation. As expected the rate for the collision clause has been raised and is now 4-5 per cent. as against ¾ per cent. last season.

Messrs. Pennington, of Cleveland, and Parker, of Detroit, who attended the Chicago meeting in the interest of the vessel owners were very well treated but they did not get as much as was expected in the effort to help the "hold-back" movement, although the situation was forcibly presented to the underwriters. They asked for a deduction of 20 per cent. for April and got instead 15 per cent. for boats not starting until May 15. The tariff allows the usual deduction of 10 per cent. for April but does not split that month as in former years. This will have a tendency to hold even the lumber carriers in port until May 1. On A 1 and A 1½ steamers valued at over $75,000, the risks will be extended without cost for five days from November 30, if application be made by noon of that date. On all other classes the risks terminate as heretofore, steamers being charged 10 per cent., and sail and tow craft 20 per cent. over the season rate for such extension. The tariff in full is as follows:

VALUATION IN POLICY.	$150,000 and over.	$100,000 and under $150,000.	$75,000 and under $100,000.	$50,000 and under $75,000.	$25,000 and under $50,000.	$15,000 and under $25,000.	$10,000 and under $15,000.	Under $10,000.		Particular average.
Limit of Insurance except B1.	9-10	9-10	8-9	7-8	6-7	5-6	4-5	2-3		
Steamers A1	3½	3¾	4	4¼	4¾	5½	6½	8	.....	Average same as full season rate for full policy.
A1½	.....	4	4¼	4½	5	5¾	7	9	.....	
A2	.....	.....	4½	4¾	5¼	6	7¼	9¾	....	
A2½	.....	.....	.....	6¼	6¾	7½	8¾	11	.....	
Limit 2-3 on B1	.....	.....	.....	.....	.....	9	10½	13	.....	
Season April 1 to Nov. 30										
Sail A1	.....	.....	4¼	4¾	5¼	6	7	8½	.....	
A1½	.....	.....	4½	5	5½	6½	7½	9	.....	
A2	.....	.....	.....	5¼	6	7	8	10	.....	
A2½	.....	.....	.....		8	9	10	12	.....	
Limit 2-3 on B1	.....	.....	.....		.....	11	12	14	.....	
Season April 1 to Nov. 30										
								$5,000 and under $10,000.	Under $5,000.	
Lake Tugs...A1 and A1½	.....	.....	.....	.....	.....	4	4¾	5¾	7	5
A2	.....	.....	.....	.....	.....	4½	5¼	6¼	7½	6
A2½	.....	.....	.....	.....	.....	.....	6	7	8¼	8
B1	.....	.....	.....	.....	.....	.....	6¾	7¾	9	9
Season April 1 to Dec. 10.										

Deduct ¼ per cent. for water bottoms.

Deduct 1 per cent. for harbor tugs, with lake privileges to the extent of 20 miles.

For wrecking privileges on tugs, add 1 per cent.

When full wrecking privileges are not desired, policies may be indorsed permitted to wreck for ¼ per cent. additional for each service rendered to Oct. 1, and thereafter at ½ per cent. for each service rendered.

For yearly policies, add ¼ per cent to above rates.

For agreement to make loss or damage by fire to be settled under conditions of special clause, add 75 cents to the season rate, with pro rata deductions for months expired. This clause to be attached to such marine policies only as include the fire risk. A rebate of 25 cents to be allowed if risk terminates on Nov. 30, at noon.

Add for collision clause 8-10 per cent. for season, with pro rata deductions for months expired, and cancellation.

RULES.—No allowance or deduction shall be made for portions of months expired except as below noted, and there shall be no suspension of the policy or rebate allowed for vessels lying up during the life of the policy.

Deduct for excepted fire risk on steam craft and on barges built entirely of iron or steel, 6 cents per month.

Deduct for total loss and general average only, steam 10 per cent., sail 20 per cent.

Deduct for total loss (actual or constructive only,) 30 per cent.

These last deductions to be made after deducting for fire risk if excepted.

Not more than six months credit on premiums, and all notes to mature on or before Nov. 1 on season risks.

Discount for cash at the rate of 6 per cent. per annum.

Extensions—Five days extensions to Dec. 5, to be granted without charge on A 1 and A 1½ steamers valued in the policy at $75,000 and upwards if applied for on or before noon of Nov. 30.

Five days extension on all other vessels from Nov. 30. Rate 20 per cent. of the season rate on sail or tow barges and 10 per cent. on steam.

The classification of Inland Lloyds 1891 Register to govern as to class and value. Value in policy not to be less than 80 per cent. of valuation in register, and not to exceed register valuation with 10 per cent. added thereto.

Vessels, sail or steam (except tugs) under $15,000 not to be allowed any increased valuation.

DEDUCTIONS.

For risks not attaching until May 1.....	10 per cent.	of season rate.
" " " " " May 15.....	15 "	"
" " " " " July 1.....	20 "	"
" " " " " August 1.....	25 "	"
" " " " " Sept. 1.....	30 "	"
" " " " " Oct. 1.....	40 "	"
" " " " " Nov. 1.....	55 "	"

(No deduction for partially expired months except for month of May as above noted.)

CANCELLATIONS.

June 1, return.....	70 per cent.	of season rate.
July 1, "	60 "	"
August 1, "	50 "	"
Sept. 1, "	40 "	"
Oct. 1, "	30 "	"
Nov. 1, "	20 "	"
Nov. 15, "	10 "	"

(No allowance for partially expired months except for month of Nov. as above noted.)

No general agent or company in any case to allow over 10 per cent. commission to local agents, or any other consideration whatever, at any time whatsoever, and no agent, company or general agent shall be allowed to pay any part of his commission to any vessel owner, broker or any other person.

The Steam Jacket.

At a recent meeting of the American Institution of Mechanical Engineers a paper was read on "Authorities on the Steam Jacket; Facts and Current Opinion," by Prof. R. H. Thurston. Great differences of opinion have been manifested in recent discussions as to the value of steam jackets, and Dr. Thurston has made a useful compilation, covering forty pages, of figures and opinions, which, as he states, may be used as an introduction to a more formal discussion of the philosophy of the steam jacket. He believes that such discussion will probably largely reconcile the apparently conflicting opinions by exhibiting the fact that the jacket may, under different circumstances, prove a decided advantage, an unimportant appurtenance to the engine, or even, under exceptional conditions, deleterious to efficiency. A summary of results by various authorities shows that the gain by use of a steam jacket ranges all the way from zero up to over 30 per cent.

Lake Builders Bidding for Light-House Tenders.

In this issue of the REVIEW is an advertisement from the light-house board stating specifications and information will be furnished shipbuilders who wish to bid on the light-house tenders Lilac and Columbine. They will be almost counterparts of the Marigold, recently completed by the Detroit Dry Dock Company. They will be 155 feet at the water line, 145 feet inside, 26½ feet molded beam and 15 feet depth of hold. The engines will be inverted cylinder fore and aft compound, 22 and 41 by 30, steam for which will be furnished by two cylindrical boilers, 10 feet 8 inches by 10 feet 9 inches and the wheel will be 9 feet 4 inches. Several lake builders have requirements and specifications under advisement, but the boats must be delivered within ten months, which would be about January 30 of next year. This will practically bar out lake builders for at that time the canals and lakes will be frozen up. November 15 is as late as they can count on getting the boats through to salt water, therefore they will have, if this requirement is insisted upon, less than six months to build. Some provision should be made to overcome this difficulty. The appropriation for the Marigold was $85,000 and the contract price about $80,000.

The Outlook in Ore.

Rumors of Ashland ore contracts at $1 a ton have been free during the week but they have received only passing attention by vessel owners who seem less interested than at any time during the winter. Ore dealers generally expect to get Ashland tonnage at $1, and the few among them who have sold a little ore would take some tonnage now at that figure. Vessel owners feel that the ore men may be successful in this but the announcement of charters at such a figure will not create a sensation. Only a limited amount of tonnage may be expected to accept such a price.

The Demand for Arbitration.

It is seldom that the findings of a federal court are criticised openly among lake vessel owners, but the decisions given out in two or three cases in Detroit last week by Judge Hammond, of Memphis, Tenn., have been the subject of a great deal of unfavorable talk, and only go to prove the advisability of at least giving earnest attention to the matter of arbitration in lake losses. The appointment of United States judges for life and other surroundings of the office that establish its integrity beyond the conception of a doubt are features of the highest importance, but it can be said without fear of contradiction that the many changes among judges in lake districts of late years has wearied vessel owners, who have millions of dollars involved in law suits each season, and whose interests in this regard have increased in such a manner as to excite wonder throughout the entire country. This was clearly shown in the discussion at the last annual meeting of the Lake Carriers' Association when a committee of leading vessel owners, of which Mr. H. M. Hanna, of Cleveland, is chairman, was appointed to secure legal assistance and present a plan of arbitration that will be made, if possible, as binding as the federal courts.

Returning to the decisions of Judge Hammond, it can be said that the disapproval of them will go a great way toward strengthening this demand for an arbitration system. His conclusions in the Siberia–Ohio–Mather, case may be left without comment as far as the triple division of damages is concerned. The decision is probably satisfactory to the owners of the Mather, which was made a party to the libel, but it was decidedly unsatisfactory to the owners of the Ohio and Siberia, and it is only natural that the defeated party should complain. It is with regard to the light manner in which the court dealt with the question of "suction," however, that a storm of disapproval is shown by vessel owners and competant masters all around the lakes, who have permitted their names to be used in connection with forcible criticism of the wording of the decision in this regard. A setback has been given to efforts of vessel owners and government authorities in charge of the canals and other connecting waterways of the lakes, who have labored for three years past to put a stop to reckless navigation.

If the conclusions of the court had been given in this collision case irrespective of the weak expression of opinion regarding the matter of "suction," the decision would certainly have been accepted on its merits without the disapproval that is now so plainly shown. But Judge Hammond decided another case in which his conclusions are accompanied by agreat flow of "flowery" language that is criticised as poor reasoning and decidedly unbecoming a suit in which many thousands of dollars are involved. In this case reference may be made to what would appear like a direct contradiction in the decision itself. It is the case of the owners of the barge midnight against the propeller Wilhelm. On Nov. 27, 1889, the schooners Mears and Midnight, in tow of the propeller Wilhelm, loaded with lumber, were overtaken by a storm, off Thunder bay, Lake Huron. The steamer did not put into Thunder bay, and the storm was weathered for some time before the tow line was finally parted by the abrupt turn of the steamer in hauling to, and the schooners went ashore. The owners of the schooners made the claim that the master of the Wilhelm had not properly regarded the condition of the weather and had ridden into danger. Other specific faults imputed to the Wilhelm were that of not laying her head to the wind until the storm abated, when she first hauled away; of taking a shoal water course the second time after previous warning of the necessity of keeping out; of not clearing Fish point before hauling out the second time, and of hauling out too abruptly at the time of this second maneuver. It is with regard to the breaking of the tow line at the time of this second hauling out that the decision seems particularly conflicting. After admitting that the storm had abated when the steamer hauled out a second time, and that it was for the purpose of avoiding the danger of passing a point of safety, the court charges the breaking of the tow line not to the abrupt turn but to the "furious, violent and destructive storm," and then portrays a flooded engine room, diminished steam, cargo being swept from deck, etc.

Truly there is need of an urgent movement for arbitration. The new law regarding circuit judges will place final jurisdiction in admiralty cases in the hands of district judges whose decisions are now criticised on account of insufficient knowledge of the complications attending such cases. Judge Hammond, even, may be made one of the circuit judges who would have to do with final jurisdiction in cases from this district. The circuit court for this district will probably first be made up of Justice Brown, Judge Jackson and an appointment from Ohio, but Judge Jackson is growing old and Judge Hammond has been spoken of as his successor.

The Steering Gear Must be Watched.

A decision given out by Judge Swan, of the United States district court in Detroit, Monday, contains a warning to vessel masters to look after their steering gear. On April 28 of last year, the steamship Cayuga, entering the St. Clair river, met the propeller Wilson towing the schooner Manitowoc. The steamers passed all right, port to port, but the Cayuga had hardly passed the Wilson when she suddenly sheered, until she caught the tow line of the Manitowoc on her stern, She then scraped down the line until she struck and sunk the Manitowoc. The Cayuga's defense was that the accident was unavoidable. It was claimed that the chain of the Cayuga's steam steering apparatus became suddenly and inexplicably out of order, and that as soon as this was discovered she was reversed at full speed. Upon these proofs Judge Swan decided Monday morning that the Cayuga was entirely to blame. The Manitowac showed that the chain of the Cayuga was very improperly adjusted to the quadrant. The latter is a fan-shaped device attached to the rudder shaft provided with grooves for the chain to run in. It was shown that when the helm of the Cayuga was put hard over one way or the other, the free chain would become so slack as to slip out of the groove in the quadrant and became useless when called upon again in putting the helm the other way, unless replaced in the groove. This Judge Swan held to be very clear negligence.

Iron Mining.

VALUE OF LEADING STOCKS.

Quoted by Chas. H. Potter & Co., No. 104 Superior St.

Stocks.	Par Value.	Bid.	Asked.
Cleveland Iron Mining Company	$ 25 00	$ 15 00	$ 17 00
Champion Iron Company	25 00	90 00	100 00
Chandler Iron Company	25 00	39 00	40 00
Chicago and Minnesota Ore Company	100 00	.....	110 00
Iron Cliffs Iron Company	50 00	.....	120 00
Jackson Iron Company	25 00	90 00	100 00
Lake Superior Iron Company	25 00	65 00	68 00
Minnesota Iron Company	100 00	70 00	80 00
Pittsburg Lake Angeline Iron Co	25 00	145 00	.....
Republic Iron Company	25 00	27 00	29 00
Michigamme	25 00	8 50	10 00

The market for mining shares shows no improvement. Prices of the past week have even been shaded on a few of the leading stocks which would, of course, be taken quite freely at any further reduction. There was no truth in the rumor of a Republic divided and no utterance from the office of the company to cause such a report. Another installment of the 6 per cent. dividend of the Minnesota Iron Company is about due but there has been no announcement of it. Mr. M. A. Bradley, of Cleveland, who some time ago began investigations with a view to purchasing mineral property on the Vermillion and Mesaba ranges, of Minnesota, in order to insure work for the large fleet of boats which he controls, is interested in the purchase of a Vermillion mine known as the Great Northern. The location is Sect. 25-63-12, near Ely, and the purchase price is said to be $40,000. A shaft on the property is now down 200 feet.

Foxdale is the name of an iron mining company formed in Ishpeming a few days ago for the purpose of carrying on operations on land adjoining the Humboldt mine to the west. The new company is capitalized at $1,500,000, the number of shares being 60,000 of $25 each. The officers are: Thomas Buzzo, president and general manager; Robert Maxwell, treasurer; D. F. Wadsworth, secretary, all of Ishpeming. These with Messrs. C. H. Kirkwood, M. B. Toutloof, G. H. Arthur, of Ishpeming, and D. H. Powell, of Marquette, form the board of directors. A royalty of 25 cents per ton is to be paid upon the product, which is supposed to be a hard ore of good quality. Capt. Thomas Buzzo, the president and general manager of the mine, has been known in connection with the Salisbury mine.

The Doran bill, a state legislative measure which proposed the assessment of a heavy specific tax on mining companies in Michigan, and about which so much has been said of late, was finally killed last week, and in its stead a bill was passed repealing the present specific tax and placing iron mining lands on an equality with other property in the state. It is claimed by the advocates of higher taxation for the mines that the substitute measure will increase the tax revenue of the state but there is some question on the subject. It is certain that some of the big mines will profit by the new law.

The unfavorable outlook in the ore market has about shut out all chance of profit in the mines of the Michigamme district, the ores of this portion of the Lake Superior district being of too poor a quality to warrant extensive mining. The Imperial, formerly known as the Wetmore, is the only property of the district now in operation. At the Michigamme mine there are not more than a dozen men employed but good results are being obtained from the magnetic separators.

The ore in the east end of the Champion mine, a comparatively recent discovery, gives unusual promise of additional revenue for the company. Enough has already been done to show that all the levels previously opened in that end of the property will again become available from the eastern shaft, which was practically abandoned because of the lack of ore.

After an association of twelve years with the office of commisioner of mineral statistics for the state of Michigan, Prof. Charles D. Lawton is to be succeeded by James Edwards, of Houghton.

James Farmer, late president of the State National Bank, of Cleveland, and a large owner in the Lake Angeline mine, died at his residence in Cleveland, Tuesday, March 17, in his eighty-ninth year.

Opening of the Lake Michigan Lumber Trade.

Special Correspondence to the MARINE REVIEW.

MILWAUKEE, WIS., April 2.—In ten days more a large proportion of the fleet engaged in the lumber trade on Lake Michigan will be in commission. The season opens with a prospect of a fair amount of business at about the range of freights which ruled in 1890. The winter just passed has been favorable for operations in the woods, and in consequence the amount of ties, cedar posts, wood, etc., got out is greater than was the case a year ago. This, coupled with the fact that tonnage suitable for the trade has decreased somewhat, affords a promise of an active season and fairly remunerative rates. However, every dollar that may be made in this direction will have to be striven for, as wide margins belong to the past and need never again be looked for.

Of the larger class of vessels the only ones likely to start simultaneously with the announcement of the opening of the Straits are the steamer P. J. Ralph and barge Allegheny. The latter has on board a cargo of rye, and as the Ralph is to tow her a grain cargo will have to be obtained for the steamer, either here or at Chicago. The Allegheny has the only cargo placed on board here thus far for shipment through to Buffalo by water.

Since the launch of the steamers Pueblo and Ferdinand Schlesinger Milwaukee ship carpenters have found little work to do except on occasional repair jobs. The outlook at present promises them a long season of enforced idleness. The steamer Ferdinand Schlesinger has yet to receive her boilers, iron boiler house and pole spars. She is the largest wooden steamer on the lakes and bears a name corresponding to her length. Just how this name will be disposed of by Commodore Wolf under the new order requiring that it sha l be placed on the bow is a source of interest in some quarters. If placed there in full, and in proper shape, it threatens to extend to the forerigging. There is no doubt that after having selected the name Commodore Wolf reached the conclusion that he had put his foot in it. But after the public announcement a change could not be made with good grace, or without eliciting comment and criticism, and so it had to stick even if it threatened to cover the entire side of the steamer.

The West Bay City Builders.

Special Correspondence to the MARINE REVIEW.

WEST BAY CITY, MICH., April 2.—Work at all of the shipyards is being pushed forward very rapidly. Three of Davidson's "Big Four" are practically ready to launch. The Sauber, Capt. Michell's boat at Wheeler & Co's yard, already has the ways under her, but she will not be slid into the water until some time during the coming week. The City of Chicago will be ready to launch, for the second time, about April 14, and Capt. Graham expects to have her on the way to Chicago before May 5. The propeller Benton, which is having steel keelsons and deck beams put in will not be completed for several days yet, owing to a delay in the shipment of steel. Capt. Pierce, her owner, says he would not care if she was not completed until May 1, or even to the 15th, if other boats were only in the same condition. The opening of navigation here will depend entirely on the weather. The "hold-back" movement is having no effect on the lumber carriers. As soon as the ice goes out of the rivers and Saginaw bay the lumber will begin to move. Even the rule which, when adopted, was going to be enforced at all costs, and over which there was so much talk among owners and agents, that of having the lumber placed free on the rail at Saginaw river ports, is already dead, before a single vessel has loaded. The old way of paying half a season's profits to the 'longshoreman will be in vogue another year. The "Boy" line steamers have already commenced their trips between Bay City and Saginaw. The Post Boy started Thursday and the new steamer Sailor Boy will begin running next week. Capt. By. Knowlton, who has been on the "Boy" line steamers for several years, will go on the R. G. Stewart as second officer this year.

Chicago Lumber Carriers.

Special Correspondence to the MARINE REVIEW.

CHICAGO, ILL., Arpil 2.—Some grain is being placed at 1¾ cents. The Western Reserve and C.W. Elphicke are among vessels recently chartered. The Elphicke gets 1⅝ cents.

The action of the Chicago association of lumber dealers with regard to the "hold back" movement is considered very strange but it will probably have no particular bearing on the general situation. At a meeting of the association, Saturday, at which President Howe, Capt. Olson, W. F. Butters, Robert Reed, D. W. Holmes and Mr. Green were present, it was decided that all steam lumber vessels owned in Chicago be manned and equipped to begin work within ten days and that should over 8 per cent. of the lumber fleet be in commission within the next two weeks they be withdrawn and tied up until May 1. This action from the lumber association is no more than might be expected. Its members own the lumber at the mills on Lake Michigan in many cases, or else held charters that call for an early freighting season.

The Alert one of the largest boats employed in the tow of the Green Dredging Company has been rebuilt from the water's edge at a cost of $4,000. She will also begin work this season with new cylinders and boilers.

The Northern Coal Surplus.

Special Correspondence to the MARINE REVIEW.

DULUTH, MINN., April 2.—A large increase in the demand from new manufacturing concerns and a long drawn out winter that had a mild begining, are the causes that have led to a big reduction in the coal supply. At the opening of navigation in 1888 the docks at the head of Lake Superior were swept clean of coal of any kind. The opposite extreme was reached in the year following, 1889, when navigation opened with fully 400,000 tons at the head of the lakes. Last spring the stock carried over amounted to about 200,000 tons, and it is generally admitted now that there will not be mo e than 125,000 to 130,000 tons of both hard and soft coal in this vicinity when the first boats arrive.

The Pioneer Fuel Company estimates its nest egg as only 5,000 tons at the opening of navigation. The Lehigh places its probable surplus at 10,000 tons of hard and 10,000 of soft coal. The Northwestern reports its stock as moving rapidly and the matter of a surplus is rather uncertain. Probably 50,000 tons will have to be carried over. The Silver Creek and Morris, and the St. Paul & Pacific will undoubtedly have left about 30,000 tons. A representative of the Ohio company says that sales have been fully thirty per cent. greater than they were last year.

From Across the Border.

Special Correspondence to the MARINE REVIEW.

KINGSTON, ONT., May 2.—The way things look now it will make very little difference to marine interests whether the ice that is still strong in the harbor remains for two months or breaks up immediately. The information in the last REVIEW that while last year at this time there were four million bushels of grain in Chicago to be sent forward, there are not half a million now, has caused forwarders to feel rather gloomy. They realize that a dull season across the border will have its effects here. Then remembering that there will be little or no timber carried this season the outlook for vessel owners and sailors is very blue. Not a single charter has yet been announced here, a fact which some say is unprecedented.

It was the intention of the Montreal Transportation Company to begin the construction of a monster steambarge for the lake grain trade, but certainly at present there is no encouragement for the beginning of such a work. No doubt the building of the boat will be delayed till the prospects are brighter.

The enlargement of the steamer Norseman will not be completed until near the end of May, which will be at least two weeks later than she should be on her route across the lake to Rochester. The route will not suffer, however, as Mr. Gildersleeve, her owner, will see that a good substitute will do her work till she is ready. The Norseman will be one of the finest boats on the lakes. The steamer Hero, owned by the same gengleman, is also being improved. She had a very successful season last year, and $5 would pay for all mishaps.

The steamer Isaac May, owned by the Collinsby Rafting Company, and which was burned last fall, has been rebuilt and is now like a new boat. She will have the name Orion on her bow.

Word comes from Oswego that owing to poor prospects almost any vessel in that port could be bought at a low figure; that several have already been sold, and that others are advertised for sale.

In speaking of the disappearance of wrecking in these parts, Wrecker John Donnelly says the main cause is the fact that very few small vessels are now on the lakes. The number is growing less each year. It was not many years ago when he could stand on one wreck in Lake Ontario and shoot a bullet into eight others. Then money was made by wrecking, but the harvest seems to have been reaped.

News That Runs the Rapids.

Special Correspondence to the MARINE REVIEW.

PORT HURON, Mich., April 2.—Ed. J. Kendall, marine reporter, went up the shore about two miles, Monday, with his marine glasses but was not able to see any water. The ice was piled up ten feet high, and he thinks an early opening impossible, even if it was desirable. The steamer Conger was stuck in the ice four days near Marine City, but arrived up all right.

The work of removing wrecks of the Tremble and Ben Hur is proceeding slowly. Diving in the rapids at this time of the year is very risky, but the divers have made several examinations.

Joseph B. Comstock will be the name of the new barge building at Algonac for A. W. Comstock.

Happenings at Lake Michigan East Shore Points.

Special Correspondence to the MARINE REVIEW.

GRAND HAVEN, Mich., April 2.—At Capt. Kirby's saw mill some 200,000 feet of ship timber delivered during the winter is being cut up and it is expected that the captain will lay the keel for a large steamer during the summer. On the other hand the Cutler & Savidge Lumber Company is preparing to sell its two schooners, the David Macy and Hunter Savidge. The boats are being fitted out but the present season will see an end to operations of the lumber company at this place. The tug Sill, of Racine, has been purchased by Crosby & Co., of Muskegon, and will be used in doing government work at Muskegon. David Charles, of Muskegon, will command her.

The schooner Charles E. Wyman, recently purchased by Milwaukee parties, is the first boat to make a move outside of the regular line carriers. She took lumber at Manistee for Milwaukee. Bloecker & Co., are overhauling the engines of the propeller Wood, which arrived here from Saugatuck.

Congress and the Lake Marine.

Hon. T. E. Burton, who represented Cleveland in the Fifty-first congress, was greeted by Cleveland masters, members of the Excelsior Marine Benevolent Association, Saturday, and he addressed them in a most instructive manner. Mr. Burton's efforts in behalf of lake commerce during his term in congress can only be appreciated by those who understand the enormity of the work which he had on hand. His sacrifice of interests that might serve him well in a political way is known in all parts of the lakes. His address to the captains was upon the system attending the passage of different measures through congress and the make-up and workings of committees. By using, as a comparison, bills for harbor improvements and light-houses, Mr. Burton succeeded in instructing his hearers in a manner that will prove valuable to them in dealing with future legislation. Taking up a light-house bill Mr. Burton followed it from its introduction in the house to the efforts attending recognition of it by the general committee to which it is referred and the subcommittee that may bury it at its inception; thence to the secretary of the treasury, through that officer to the light-house board and again to the local officer of the district in which the light is sought. It is again returned over the same route to the general committee, with no hope for it if it has not met with approval. In the general committee there still remains a great deal of labor even with the most urgent measures. But it is in connection with bills of this kind reported favorably by the general committees and their adoption by congress that the great mistake is made by many in thinking that appropriations authorized for light-houses, fog signals, public buildings, etc., carry with them the actual appropriations when, in fact, the moneys are seldom set aside until the following session. Only when appropriations authorized in this way are included in the sundry civil appropriation bill, which is passed toward the close of the session, are the moneys forthcoming. With harbor improvements included in the river and harbor bill, however, the system is somewhat different, the appropriations being carried with the passage of the bill, on account of the variety of interests and the great amount of detail attending the preparation of this great measure each year. To illustrate the vast amount of committee work in congress and the hopelessness of succeeding excepting with measures of the greatest importance, Mr Burton said that it was shown at the opening of the Fifty-first congress that only a twenty-fifth to a fourteenth of the bills acted on the three preceeding congresses had been carried through. "Keep constantly hammering away in all efforts for improvements," he said in conclusion. "This great body, the United States, is cumbersome and moves slowly. Do not be discouraged by the delays pertaining to the machinery of government affairs. It is a long road with many turns. Move public sentiment and you will move the administration, congress and all. It is the settled policy of the government that we have a 20-foot channel between Duluth, Chicago and Buffalo and this can be brought about speedily by persistent effort on your part. And now let me say in conclusion that for the work I did in congress I feel amply paid in remembering that it was in the interest of a merchant marine that gives promise of being the greatest on the globe."

The binders advertised in the REVIEW some time ago have been received. Order at once. Price 75 cents, postage paid.

American Lake Steamers.

AND FOREIGN GOING VESSELS, WITH RUDIMENTARY NOTES ON STABILITY AND CASUALTIES IN FOREIGN WATERS.

* *By Joseph R. Oldham, N. A. Cleveland, O.*

[CONCLUDED FROM LAST WEEK.]

On account of the extreme stiffness of our lake steamers, as usually loaded, and the extreme crankness of many of the foreign steamers, it may be interesting to touch on the salient points governing these qualities in floating vessels. In speaking of stability—meaning stable equilibrium, as applied to loaded floating vessels, whether submerged or otherwise—it must be understood that we do not generally refer to any intrinsic quality which the vessel possesses of herself apart from the load she has in her, for, as I explained in a pamphlet of mine written last year, when speaking of very broad and shallow steamers, "to secure regular and easy motions in a seaway is more a question of stowage than model, as a well modeled boat will not behave well in a seaway with her center of gravity too low,and a very full model may do fairly well if the cargo be so stowed as to give her only a moderate metacentric height." At some future time I may supply an illustration of this matter, showing that a dangerous and thoroughly unseaworthy vessel, even when fully loaded with an ordinary general cargo, was rendered perfectly stable by appropriate loading. This illustration should prove that any steamer, however unstable she may be under ordinary conditions, could be rendered perfectly stable and safe if intelligently loaded, with a correct diagram of stability as a guide. It would not, however, be true economy to design cargo steamers so that they could not become unstable when loaded in the usual manner, for such vessels would become dangerously stiff when laden with certain freights; besides, broad vessels are the most expensive, and deep vessels the cheapest to build. As regards to broad, shallow vessels, let me say that if the righting levers be too long, the righting moments will be too powerful and the vessel will thereby be brought up too quickly; that is, there will be a sudden stop at each roll which will cause an injurious jar to the hull and machinery and also inconvenience, if not danger to those on board. In the case of passenger steamers, or in other vessels having too much stability under ordinary conditions of loading, I would recommend that deep bilge keels be fitted, if there is sufficient dead rise for these to clear the ground, as such would largely reduce the amplitude of roll and lessen the shock of reaction. Another way to prevent or lessen rolling is to construct water chambers, say above the main deck. These chambers are partially filled with water and, as the work of the ship in rolling is increased by having to dash the loose water from side to side, this effort, of course, reduces the amplitude of roll.

Before finally leaving this question of the stability of ships I may mention one interesting feature made clear by these investigations and that is that a ship may have a positive righting moment, both at the upright, and when inclined say to 90 degrees from the upright, while at some intermediate inclination there would occur a position of unstable equilibrium. Here is a new steamer in which such conditions obtain in her launching trim. She is 373x45x33 feet. She has a small righting lever when upright, or nearly so, and also when on her beam ends, but between these positions she is unstable.

As the stability of the ordinary merchant steamer depends not so largely on the proportions or model, as on the specific gravity and stowage of the freight poured into her, so for financial success, it is not so much a question of first cost of steamers as it is of first quality in hull and machinery, and high class, resourceful commanders and officers. For these desiderata brains and nerve are far more essential to success than muscle or even skill of a purely physical or merely imitative kind. Although I would not intentionally say a word in disparagement of what is sometimes erroneously called the laboring classes, I think the fact is frequently overlooked that others beside those who habitually handle the spade, the saw, or even the chipping hammer, also labor for what they believe to be the good of their fellow man, even though the incentive to their efforts in that direction be more than tinged with selfishness. Is it not true that the brain of Nasmyth, who invented the steam hammer and gave it to the nations, has been more powerful, even in a physical sense, than many hundreds of laborers? But your minds will readily turn to still more striking instances of the triumph of mind over matter. Ten million tons of steam shipping would not now be plying on the briny deep, but for the invention of the surface condenser, unless in a fitful and crippled way. A mighty leap was this, no transient stride,but a great conception of still greater brain. I believe the principles of social economy are seldom understood or honestly taught by many of those who profess to teach the laboring classes. Let the possibilities of rising by brain power from the lowest to the highest dignities be free and within the reach of all, but do not tell the youth who has neither the ambition nor the industry to endeavor to rise that we are all equal, for he would never realize the truth of the lesson as it is not there. Permit me to say to our younger friends that the shipmaster ought to be a ready, an exact and a full man, by virtue of reading, writing and talking, though you will agree with me when I say that the less of the latter portion of Bacon's recipe, the better. Remember that a ship master on the high seas, at least, has more power committed to his trust, for the time being, than our magistrates, judges, or even our president. I have found a good disciplinarian more respected by his men than what is called a good natured master, but, of course, there is a golden mean in all things. Still there should only be one master over any establishment. Let the young officer study the science of navigation, the laws of Kepler and Newton, for he may soon find himself adrift on the ocean, with nothing but the heavenly bodies as guides to keep him off a lea shore. He already knows that he may start from the continent, sail west all the time and come back to the port from which he started. Consider further a world traveling at the rate of over 1,000 miles per minute, and this by no other force, since the first impulse was given, than that of gravity—for what is called centrifugal force is not a force in that respect, but is the resultant of two forces—and you will not then be unduly elated by our puny efforts resulting in driving a freight steamer sixteen miles per hour. Again consider that not quite 15 per cent. of the calorific value of the heat of the coal burned in that vessels furnace is converted into useful work by her boilers and engines and that over 85 per cent. is practically lost, and surely you will find range enough here for your inventive energies. Endeavor to arrest this enormous loss, for be it remembered that it is the great waste that causes us trouble and expense. Again, does the young officer ever understand the scientific reason why that shivering of the canvas at the throat of his spanker, or in the belly of the jib, is so detrimental to speed, when he is close hauled? Does it ever occur to his inquiring mind that there is a close analogy between the effective effort of that sail and what I will call the preventing or retarding effort of the break on a railroad train? If not, let me stimulate his inventive faculties by saying that the power of those sails in their present position is the result of a rare faction or partial vacuum on the leaward sides of their surfaces. I would advise you to be up and doing with a heart for any fate; be pushing on, ever reaping something new. Remember that for every effect there is a cause, to every how a why, and there is no reason to doubt that also in physical things, every cause and every why is knowable. But beware of the system of cram; there is such a thing as over-study, do not labor so long and so hard as to bring on a distaste for books; rather let the young man bring away with him that fresh spirit of endeavor and valor without which no man ever made his mark in the world. This country is young, your possibilities are infinite, and it may be that some of you may almost live to behold the heavens filled with commerce, and the nations' airy navies grappling in the central blue. For, when we think over what has been accomplished by the electrician and the engineer during the preceding half century, who dare say what may not be accomplished within the next fifty years, when the war drum beats no longer and the battle flags are furled in the parliament of man, the Federation of the world.

* Read before the Excelsior Marine Benevolent Association.

Masters and Engineers.

Following are appointments for the Vermont Central Line: Steamers—Gov. Smith, Capt. W. S. Shay, James Turnbull, engineer; J. R. Langdon, Capt. Harvey Brown, John Philips, engineer; A. McVittie, Capt. William Rollo, W. P. Trelevan, engineer; H. R. James, Capt. James Owen, D. G. Costello, engineer; F. H. Prince, Capt. D. A. Kiah, T. J. Teahan, engineer; W. J. Averill, Capt. W. R. Waite, Albert Houghten, engineer; W. A. Haskell, Capt. W. H. Williams, Harris Higgins, engineer; W. L. Frost, Capt. Daniel Murphy, R. Chestnut, Jr., engineer.

Merchants Chicago and Montreal Line, Montreal: Steamers—Cuba, Capt. Hume, William Kennedy, engineer; Alma Munro, Capt. Brown, S. A. Mills, engineer; Acadia, Capt. Malcolmson.

Mathew Line, Toronto, Ont.: Steamers—Niagara, Capt. J. Morgan, E. Taylor, engineer; Clinton, Capt. J, Clifford, James Bracken, engineer. Schooners—Laura, Capt. S. C. Malcolmson; Emerald, Capt. M. Troy; Clara Youell, Capt. John Philips; Lesgar, Capt. H. McClory; Grimsby, Capt. W. R. Maitland.

Montreal Transportation Company, Kingston, Ont.: Steamers—Active, Capt. John Gaskin; Bronson, Capt. James Murray; Glide, Capt. Charles Martin; Glengarry, Capt. James McMaugh; Jessie Hall, Capt. James Martin; Walker, Capt. James Mandlesey; Thompson, Capt. James Murray. Schooners—Glenora, Capt. James Kennedy; John Gaskin, Capt. Murray Ackerman; Jennie, Capt. James Fleming; Regina, Capt. John Mallett; Kildonan, Capt. Frank Lafranc; Minnedosa, Capt. John Geoghegan.

Official Numbers and Tonnage.

The following numbers were assigned lake vessels by the Bureau of Navigation, W. W. Bates, commissioner, during the week ending March 28: Steam—Annie, Port Huron, tonnage, gross 24.23, net 37.23, No. 106,810; Bay City, Port Huron, tonnage, gross 64.89, net 32.45, No. 3,491; F. W. Fletcher, Port Huron, tonnage, gross 495.95, net 314.13, No. 120 834; J. H. Smalley, Port Huron, tonnage, gross 32.95, net 16.49, No. 76,931; Laura D., Toledo, tonnage, gross 135.04, net 122.36, No. 141,122; Walter D., Toledo, tonnage, gross 136.19, net 123.21.

MARINE REVIEW.

DEVOTED TO THE LAKE MARINE AND KINDRED INTERESTS.

JOHN M. MULROONEY, ... } PROPRIETORS.
F. M. BARTON, ... }

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SECRETARY WINDOM, in the speech made by him on the last day of his life, quoted figures prepared by the MARINE REVIEW and kept standing at the head of its editorial page, showing that the tonnage which passed through the Detroit river during the 234 days of navigation in 1889 exceeded by 2,468,127 tons the entire British and foreign tonnage which entered and cleared at London and Liverpool that year in the foreign and coastwise trade; and that the freight which passed through the St. Mary's Falls canal in 1890 exceeded by 2,256,876 tons the entire tonnage of all nations which passed through the Suez canal in 1889. It will always be one of the great aims of the REVIEW to present data that will fully repesent the extent of lake commerce, as there is no better means of securing through congress the improvements demanded in these important waterways.

THE sinking of the big passenger steamer City of Detroit in the Detroit river is an indication of what may be expected if the big grain and ore fleet goes into commission without provision having been made for private lights. It is more than probable that the big steamer wonld have found the Lime-Kiln's channel if Duff & Gratfields ranges below the cut had been lighted. They were not lighted, however, and the big boat got in to the eastward striking McDougall's rock with great force. She now lies on the bottom at the Texas dock.

Important Letter From Gen. Poe.

The recent break in the dam at Sault Ste. Marie caused some comment among Cleveland Vessel owners which the MARINE REVIEW set forth in a letter to Gen. Poe, requesting an answer. The answer printed below, is self-explanatory:

MARINE REVIEW, Gentlemen:—I have to acknowledge receipt of yours of the 28th inst., requesting me to give certain information and express an opinion about the cofferdam at St. Mary's Falls Canal, which has recently been the subject of great solicitude, growing out of a very serious leak underneath it. During my recent visit to Sault Ste. Marie, caused by the leak referred to, I exposed myself to such extent that I have been quite ill since, and now get out of a sick bed to reply to your communication. I say this to explain why my statement is necessarily made as short as possible, as I have not the physical strength at this time to go into details.

When the construction of the new lock was first proposed one of the earliest questions was as to its location, whether it should be located in the position of the old state lock, taking water from the same prism as the present lock, or whether it would be better to construct an entirely new canal. The first case involved the construction of a cofferdam under very difficult conditions, in such a way as to enable us to drain the pit below it and, at the same time, not interfere with the navigation of the canal. The site of the cofferdam was necessarily of rock, and that of not a good character at the top.

The construction of a second canal involved a very greatly increased expenditure, but did not dispense with the cofferdam; which we must have added to it, not necessarily in the prism, but connected with it by a rock formation which, at the best, is very uncertain. There was no assurance that in making the new canal we might not have trouble from leakage from the present canal into it to quite as great an extent as through our present cofferdam. We were led to consider this possibility through the experience gained in the original construction of the canal, when a serious break occurred, and the leakage of the canal into the river from the present prism was not entirely stopped until after the completion of our cofferdam, which cut off the source of this leak. The construction of a second canal would have been very much more expensive and would have taken a longer time.

The moment we get the new lock done our double system will be available: but in case of a new canal we would have to wait the excavation of a canal prism, which is not the case with the lock located as it is.

From the day when the cofferdam was designed until the present, there has not been an hour, day or night, except during sleep, and sometimes not then, that I have not thought of the possibility of damage to our cofferdam. It has been the source of constant and intense anxiety, and that will not cease until we get at least the upper end of the new lock completed. I am in complete sympathy with the vessel men, and recognize, as perfectly legitimate, every criticism concerning the location of the cofferdam and the design under which the work is now being prosecuted. The only point I wish to make is that the subject of an entirely new canal was considered, and, after discussion, the present plan was adopted as being, all things considered, the more advantageous to the government and to the vessel men.

We believe that we can maintain our cofferdam in its present position without any serious interference with navigation; but the difficulties and dangers surrounding the case are grave, and it would be foolish to ignore them. We hope that nothing serious will occur during the season of navigation, and that a suspension of navigation will not be rendered necessary. We feel all the more assured now that we have gotten rid of another crevice in the rock. All former leaks had their origin in similar crevices, though not so large, and they were effectually stopped.

It is believed that the position of this outbreak is the last of them, and we have now the leak reduced to such an amount as to be unimportant. If nothing happens, (and of this no man living can speek with absolute confidence), we will have the new lock-pit pumped out within a week from this time. We consider our cofferdam better now than ever before.

Trusting that this information will be satisfactory, and assuring you that, so far from ojecting to criticism in this case, I court it. I have as yet seen nothing to lead me to think that it would have been preferable to construct another canal entirely independent of the old one, but I have no pride of opinion, and, in case the result should show that my jndgement was erroneous, I will then candidly admit it. Very respectfully,

O. M. POE,
Col. Corps of Engineers, Bvt. Brig. Gen., U. S. A.

The Cincinnati Underwriters.

A mistake was made last week in saying that P. H. Fleming & Co., of Chicago, will act as general agents of the Cincinnati Underwriters. J. C. Burton & Son, of Detroit, are the general agents of that company. The Detroit firm is also a correspondent of P. H. Fleming & Co., but the affairs of the Cincinnati company are all handled through Detroit.

The Cleveland and Lake Superior mining companies, old in the history of the Lake Superior iron region, go back many years in the selection of names for their big steel steamships. The name Griffin, to be given to the fourth of the Lake Superior boats, which will soon be launched from the yard of the Cleveland Ship Building Company, was first given to a dug-out used by La Salle in his explorations. Then there are the steamers Pontiac and Frontenac, named respectively for the chief of Ottowa Indians and the French governor of Canada; Joliet, the French explorer of the Mississippi; La Salle, the French priest explorer and Wawatam another Indian chief.

THROUGH SLEEPERS AND CHAIR CARS. NO EXTRA CHARGE FOR SEATS IN CHAIR CARS. On April 21, the Nickel Plate will through cars to the Pacific coast, to accommodate the many desiring to go to points in Minnesota, Iowa, Missouri, Kansas, Nebraska, the Dakotas, New Mexico, Colorado, Wyoming, Montona, Utah, Idaho, Nevada, California, Oregon and Washington. For information call on or address any agent of the Nickel Plate, or B. F. Hoiner, G. P. A., Cleveland, O.

Around the Lakes.

Capt. Thomas Richardson has sold one-eighth of the steamer Hilton for $1,250.

Capt. Mills, in the Bulgaria last season, goes in the John Harper this season.

Eighteen dredges will be employed on the Hay Lake channel work this summer.

Masters and engineers fitting out at Erie can secure copies of the REVIEW at Moses Dryfoos', 303 State street.

H. G. Trout, of Buffalo, has received an order to make one manganese bronze wheel each for the steamships Mascotte and Olivette.—Marine Journal.

A steeple-compound engine, with cyliners 16 and 34 inches in diameter, is being built at Grand Haven for Brittain, Colburn & Parks' new steamer, on the stocks at Saugatuck, Mich.

West Bay City ship carpenters who have gone to the Pacific coast write to their friends that there are indications of a boom in shipbuilding on the coast and that wages at present are $3.50 to $4.00 a day.

Capt. Clearly, formerly of the Deer Park life saving station, east of Grand Marais, has been placed in charge of the new Marquette station. Everything at the station will be in order when navigation opens.

Capt. James Calbick, for several seasons past in charge of the steamer Robert Holland in the Lake Superior lumber trade, has accepted the position of inspector and wrecking master for the Chicago marine insurance agency of P. H. Fleming & Co.

J. W. Averill is having a 50 foot steel hull constructed at the Globe yard, Cleveland, for a stake driver. Fisherman have always been troubled in putting out and pulling stakes by unstable or unseaworthy drivers. This steel hull will overcome that.

The yacht Viking, building at Ashtabula for Supt. Kimball, of the Lake Shore Railway Company, has been launched and will soon be ready for service. The machinery, which is being placed in the boat, was constructed by Clough, Witt & Co., of Cleveland.

In the fueling advertisement of the Sandusky Coal Company, inserted in the REVIEW last week, the pocket slates sent out by that company are mentioned. They write this week saying that requests for slates have commenced coming in already. There are three pages in the slate which has a pencil attached. It is convenient for masters who wish to take note of anything, where oftentimes no paper is at hand.

Knapp & Gillen, of Racine, have sold the tug Sill to Muskegon parties and will buy a larger and more powerful tug. The following vessel purchases have been made by Racine parties during the winter: William Pugh, scow Laurina, $1,000; Capt. Williamson, schooner Maj. Ferry, $4,000; Chris. C. Nailed and Erickson, one-half of schooner J. B. Newland, $2,000; H. Jensen, one-half schooner Mellitta, $1,500; Abram Anderson, one-half schooner Jennie Weaver, $1,600.

A general election will be held in a few days in the Michigan county in which Hancock and Houghton are situated and it is more than probable that the vote on the question of bonding the county for the erection of a free bridge across Portage lake, between the two towns, will be overwhelmingly in favor of the bridge. The congressional measure permitting of the erection of the bridge, which passed the last congress, provides, however, that a corps of army engineers shall examine the plans to ascertain whether the bridge will in any way hinder navigation and upon the report of these engineers also depends the success of the citizens who advocate the improvement.

The meetings held lately by labor organizations made up of men engaged in different lines of work aboard lake vessels would indicate that trouble may be expected in securing crews, especially on Lake Michigan. The Lake Seamen's Benevolent Association, which proposes to include within its ranks dock laborers as well as sailors of all kinds, has started out by fixing wages in the Chicago branch at $2 a day from the opening of navigation until the end of the fair weather season. The Seaman's Union and lake firemen of Cleveland held a meeting last week and decided to continue their organizations under the Knights of Labor. Lake Michigan vessel owners and masters are preparing to meet the opposition of the unions.

Cleveland Matters.

Capt. Wm. Kennedy thanks the masters who were so considerate and sympathetic during his late bereavement, in which he suffered the loss of his wife.

Metcalf & Dow, Cleveland divers, went to Navarre, O., a few days ago and removed four pumps from a mine owned by the Burton Ridge Coal Company. The mine had been flooded and the pumps were in 94 feet of water.

The propeller Pasadena will be brought to Cleveland from Erie in a few days to receive new boilers. The Pasadena is a new boat but her boilers, constructed by an Erie concern, have given the owners trouble ever since the boat came out.

A mistake was made last week in saying that the committee of the Cleveland Vessel Owners' Association appointed to establish wages on metal boats had fixed the limit for second engineers on such boats at $75 a month. The limit is $70 for second engineers and $115 for chiefs, and this applies only to metal boats having triple expansion engines.

Capt. David Vance, of Milwaukee, was in Cleveland during the week. He says his boats will not go into commission until about May 15 no matter what course other owners pursue. "I am interested in Milwaukee boats that have about 50,000 tons of ore to carry to Chicago on an old deal" he added "and the ore men tell us that they do not want these boats to begin work until May 15."

The pit for the second dry dock for the Ship Owners' Dry Dock Company has been excavated and Contractor Stang has driven three rows of piles in the bottom. The dock will be ready for vessels some time in August. The pumping machinery will be situated between the two docks and the new dock will be emptied in one hour. The Ship Owners company will thus have facilities for taking care of all the work that comes to this port.

Excelsior Marine Benevolent Association.

Association members will please notice that the death of Bro. J. P. McArthur, of Chicago lodge No. 3, necessitates the issuing of another assessment, to be known as assessment No. 10, amounting to two dollars, which they will remit within thirty days to W. A. Collier, grand financial secretary, V. O. T. office, Cleveland, O. In remitting state the number of lodge of which you are a member. There is no objection to members remitting in clubs where statement is sent with remittance.

Informal social gatherings will in future be a feature in the affairs of the Cleveland lodge. The first of these was given last Wednesday afternoon and evening when the captains with their wives and friends assembled in the lodge rooms and partook of an elegant repast. At the regular meeting, Friday, C. H. Hubbard and Joseph Anderson were admitted to membership.

Lodge No. 7 will be instituted at Detroit, Thursday night, with thirty-eight charter members, giving the association seven lodges and 600 members. This growth is due to the fact that it is a most excellent organization. What it has done in legislative matters is only a promise of what it will do.

George R. Howe, of the tug G. W. Westcott, is a recent addition to Branch No. 2, Port Huron. About a half dozon more names will be added to the membership list before navigation opens.

Members who have not received policies will get them as soon as they forward name of beneficiary to the grand financial secretary.

Notice to Mariners.

Commander Heyerman, light-house inspector stationed at Detroit, has given notice that the wreck of the steamer Kasota, in the Detroit river, one-half mile below the mouth of the River Rouge, and 1,650 feet from the American shore, forming an obstruction to navigation, will be marked by a lens lantern showing a white light visible all around the horizon from a pole about 12 feet in height.

The light-house board gives notice, that a fixed red light is now exhibited from a tubular lantern, suspended thirty feet above lake level, from a post set at the outer end of the north pier, at the entrance to the harbor at Chicago. The light will be visible, in clear weather, two or three statute miles, and will form, with the main pierhead light, a range showing the direction of the piers and the course to be followed in entering the harbor.

Affairs in Admiralty.

OHIO–SIBERIA–MATHER CASE.

In another part of this issue reference is made to strange decisions made last week in lake cases by Judge Hammond, of Memphis, Tenn., sitting in the district court at Detroit, and the bearing they will have upon the movement among lake vessel owners to establish a system of arbitration, doing away with court hearings. The most important of these cases, growing out of a collision which occurred in Mud lake, between Lakes Huron and Superior, on May 19, 1890, between the propeller Siberia and Ohio, resulted in a decree finding both vessels at fault and also including the propeller Mather as an element of the catastrophe, and ordering that damages be divided between the three vessels. The mere announcement that the decision was for a triple division of damages was made last week, but the case is an extraordinary one and is deserving of further attention. The Ohio was proceeding upon her course in daylight, bound up for Duluth, and the steamers Siberia and Mather were bound down. The accident happened at 10 o'clock in the forenoon. The Mather was behind the Siberia when they first sighted the Ohio in the distance coming towards them, but was going faster and overhauled her just before the three vessels were abreast. She passed the Siberia very close when, owing to some mysterious force of the water, caused by her swell or the careless management of the wheel, the Siberia "took a sheer" and, although there was nearly 1,000 feet of water separating them, she stubbornly headed for the Ohio in spite of all that could be done, struck the latter stem on upon the port side just abaft the forerigging and sank her immediately. The fight was a three-cornered one. The Ohio, which was sunk, libeled both the Siberia and Mather. The Siberia claimed that the suction which the swell of the Mather had created in passing at increased speed had caused the Siberia to sheer into the Ohio, while the Mather's explanation of the disaster was that the Siberia had been improperly steered, her helm having been put to starboard when it should have been hard to port.

"To get away from an entanglement of ideas about this case," said Judge Hammond, "probably with the witnesses, possibly with the counsel and certainly with the court, I shall reverse the order of treatment in the trial and if not more logically than more understandingly consider first of all the conduct of the Siberia, the vessel prima facia liable; then the conduct of the Ohio, the victim, these two being the clashing actors in this marine tragedy. The other vessel implicated—the Mather—the Mephistopheles of the drama—we may conceal momentarily. We should subdue that exaggeration and confusion of thought, as it seems to me, which invests with an almost supernatural power a mysterious force supposed to reside in the seemingly little understood disturbance of the water while propellers, heavily laden, are passing through it. The intense interest with which the mariners in attendance at the trial gathered around the table of diagrams and illustrations with which the only scientific expert proposed to explain 'suction,' the evident self-distrust with which these same mariners gave their testimony when examined as experts and the oft repeated expressions in this and other trials where 'suction' has been involved, have all convinced me that there is an exaggeration of its power into a mysterious causation for almost anything that happens when it is near enough to be utilized and made available as a source of danger or an excuse for not avoiding it. This question of 'suction' is inimical to fair treatment in a case like this, affects the testimony of witnesses, the argument of counsel, and, unless checked with care, would distort the judgment of the court, I fear. Moreover, the sanction of such an idea would be hurtful to navigation on these crowded lakes, where the busy ships are ever jostling each other as they pass to and fro, by unduly influencing the minds of masters and seamen to regard 'suction' as an always sufficient answer to imputations of negligence. Therefore, for the present, I lay it aside in this case. The Siberia was not thrown like a huge projectile from a Krupp gun, nor was a force anything like that in any degree set in motion against her to drive her into the Ohio."

In the case of the Siberia Judge Hammond said that it seemed to him a culpable fault that when this vessel found herself propelled irresistibly toward the Ohio by the "sheer," she did not at once reverse her wheel with all force.

"Other faults, or rather suspicions of fault, have been imputed to the Siberia," said the court, "by the Mather and Ohio. She being the vessel inflicting the injury and in actual collision, faults that cause it are inferred and presumed until she shows herself to have been faultless, by showing that the injury was caused solely by some other agency outside herself. She relies wholly upon the exaggerated influence of the 'suction' of the Mather as showing that outside agency, but we have already seen that in the opinion of the court that was not the sole cause, however potent it may have been. The court does not think, upon the proof, that that force could have alone caused this collision, however much it may have contributed to it. It is not that kind of a force which would dash 3,000 tons of ore and a massive hull through the water into the hull of a ship afar off in the open lake, and in that situation disclosed by the proof if the ship were properly managed after receiving the influence and being started off her course in the pathway of the collision. It does not seem to me reasonable, and, therefore, whatever contributing faults may be found in the other vessels the Siberia must be held also in fault."

In the pleadings of the case the Siberia did not avail herself of the right to impute negligence to the Ohio, but the Mather did. The evidence disclosed that all on board the Ohio saw the Siberia suddenly leave her course on a sheer which was violent and very peculiar in its appearance.

"What did the Ohio do?" was the remark of Judge Hammond in his opinion. "She waited, by the confession of her captain, to see if the Siberia would not recover herself. That was a fatal error and in direct violation of the statute. It is of no avail to say that there must be time to think and act There was an abundance of time for this. It was wrong thinking and wrong acting that caused the whole trouble. The Ohio had no right to rely upon the belief that the Siberia would recover herself, and it was a fatal miscalculation. Obedience to the rules of navigation would compel the Ohio to check her speed and even reverse when that dangerous situation was apparent, and, not following these rules, the Ohio was also in fault for the collision."

In the case of the Mather Judge Hammond said that being an overtaking vessel, it was her duty to give the Siberia all the sea room that was necessary in passing her. The testimony showed that the Mather attempted to pass the Siberia at a distance of from ten to seventy-five feet, and the court experienced great perplexity at the reason why the Siberia should have sheered and not the Mather when both were about the same size and heavily laden with iron ore.

"Judicially considered," said Judge Hammond, "I cannot give effect to the doubt that 'suction' caused this mishap in the face of so much proof. I find that the initial force which began the sheer came from the Mather's proximity, which was wrongful. Nothing can be made certain in such a case, and all courts can do is to follow this rule of yielding to proof. The faults on the part of the Siberia and Ohio were statutory ones and not excusable errors of judgment. Yet the conditions which made them necessary were brought on by the Mather and she contributed therefore to the injury. The court is of the opinion that on this proof the collision could not have occurred without the negligent violation of the sailing rules by all these three vessels. None of them obeyed those rules and the loss is the penalty."

"There is no case found," said Judge Hammond, "which has the peculiarities of this one and I am not sure how the damages should be divided, in view of the fact that the Siberia claims none against the Ohio. However, since the mere arithmetical process of charging each with one-third the whole damages, and without holding one-half of the one-third charged to the Ohio because the Siberia would not accuse her of any fault, would result only in lessening the damages to be paid by the Ohio and not effect the result as to the others. It would give the Ohio full damages against the other two, less only one-half that she should pay for her fault. This hardly seems a just result of the technical situation implied in the fact that the Siberia has not demanded anything of the Ohio. On reflection I have concluded that, notwithstanding this peculiarity of pleading, the fact that the Siberia's co-defendant, the Mather, does accuse the Ohio of fault by her answer it must necessarily insure to the benefit of the Siberia also and that each must pay one-third of the whole damages according to the general rule, and the other costs, including one-third the whole costs so ordered."

The Ohio was represented by C. E. Kremer, of Chicago, and J. C. Shaw; the Siberia by H. D. Goulder, of Cleveland, and F. H. Canfield, and the Mather by Henry C. Wisner and James H. Hoyt, of Cleveland.

When a division of damage is ordered in cases where both vessels are found to be at fault, it is the rule to deduct the smaller loss from the larger one and then have the vessel suffering the smaller loss pay over half of the remainder to the vessel suffering the greater loss.

Device for Trimming Ore Carrying Vessels.

In the office of Moore, Bartow & Gilchrist, Cleveland, there is on exhibition a model of a device for trimming vessels in the ore trade. A patent has been secured on the machine and preparations are being made for its manufacture and sale. It is a very simple contrivance and is looked upon with favor by vessel masters and managers of ore docks who are best fitted to judge of such a machine. A frame is made to fit the hatches of the vessel and upon this frame is mounted a funnel-shaped hopper, curved below the mouth of the funnel and long enough to extend a few feet below the hatchway. The curve in that portion of the hopper below the hatchway causes the ore to be thrown out some distance from the hatch and the whole machine revolves by means of pulleys upon a circular track, so that the funnel makes a complete circle while the ore is passing in from the pockets, thus distributing it all around the portion of the hold covered by two hatches. It is proposed to work four of the machines on a boat of eight hatches. The mouth of the hopper, which will be of ¾-inch steel, will be in most cases 5½ feet in diameter. The contrivance is not a costly one and if it can be made to do the work of trimming now done by hand it will certainly reduce the cost.

Minor Cases in Admiralty.

The case of the steam yacht Leila against the Canadian tug Onaping, another case decided at Detroit by Judge Hammond, contains no point of unusal interest, except the reason given for deciding against a re-hearing of the case. The tug rolled the yacht over, the libelant claiming it was done intentionally, although the yacht overtook the Onaping, which was on a diagonal course down the river. One of the libelants swore in the motion for rehearing that the captain of the Onaping agreed to testify that he ran the yacht down purposely, providing it was not shown that he was drunk at the time or a drinking man. This arrangement miscarried, but it seems to have had considerable bearing on the decision. Judge Hammond says in summing up, "I have given this case more careful attention than I might otherwise have done, because of the manifest feeling between the parties to it, and the somewhat general attention it has attracted as a sort of naval conflict between vessels of different nationality struggling for a right of way at the risk of life and property. It was not that and the libel is dismissed." Henry C. Wisner conducted the case for the Onaping.

Judge Sage found in the case of the Delaware against the Michigan, heard in Detroit, last week that the collision was the result of an inevitable accident, but intimated that the Delaware was in fault. The Delaware, bound up, April 13, 1890, locked through the Sault canal and on account of heavy weather tied up at the "knuckle." The propeller J. E. Owen, with schooners Michigan and Nicholson in tow, all ore laden, were bound down. Men were sent from the Michigan, to put out a snubbing line, as is usual on entering the canal, but the sea washed the yawl away from the bank and pulled the line from the hands of the sailor who had caught the edge of the pier. The Delaware libeled on a claim of fault in not landing the line and in not raising canvas.

Roberts Water Tube Boilers on the Lakes.

The Roberts Safety Water Tube Boiler Company was incorporated in 1890 and has sold up to date 326 boilers. Some of them were placed in lake craft owned by the following parties: Allan M. Fletcher's yacht Hinda, about 100 feet long, Alpena, Mich.; Francis Boyd, of the Shadbolt and Boyd Iron Company, Milwaukee, about 70 feet long; Congressman McMillan's yacht Idler, about 120 feet long, Detroit, ordered and inserted by the Fulton Iron and Engine Works; W. B. Hayden's yacht W. B., 87 feet long, Haydenville, O.; W. C. Leffel's yacht, 65 feet long, Sandusky. The company has also orders from the following parties on the lakes: Isaac Bearinger, yacht about 100 feet long, East Saginaw, Mich.; the Craig Ship Building Company boat, about 70 feet long, Toledo, O.; Chicago Ship Building Company, yacht for Mr. Porter, of the Illinois Steel company, about 70 feet long, Chicago. If you are interestod you can learn the efficiency of these boilers by writing to the parties who have tried them. They are fast coming into favor on the lakes.

When Navigation Opens.

A Duluth paper is responsible for the following: "We'll all be happy yet, you bet, when navigation opens; the sailor boys will cease to fret, when navigation opens; big boats will take out loads of grain, we'll prosper both in sun and rain, our ships will all come in again when navigation opens. The tugs will 'round the harbor fly, when navigation opens; the sailboats their white wings will try, when navigetion opens; the row boats, too, will take a spin, the ferry boats rake in the tin, our ships will all again come in, when navigation opens. The snow will all have left the ground, when navigation opens; and ice will be a dollar a pound, when navigation opens; the realty men will have a "snap," for nibblers they will set a trap, they'll wake up from their winter nap, when navigation opens."

An important fact was referred to during the debate on the shipping bill. It was that mechanical skill has become so expert, particularly in the matter of shipbuilding and equipment, that from $1\frac{3}{10}$ pounds of coal, a steam energy of one horse power for one hour, which will carry a ton of freight twenty-six miles, can be obtained.—Marine Journal.

TO SHIP-BUILDERS. OFFICE OF THE Light-House Board, Washington, D. C., March 26th, 1891. Proposals will be received at this office until 2 o'clock p m., of Thursday, the 23d day of April, 1891, for furnishing the materials and labor of all kinds necessary to const uct and deliver the United States light-house tenders *Lilac* and *Columbine*. Plans, specifications, forms of proposal, and other information may be obtained on application to this office. The right is reserved to reject any or all bids, and to waive any defect. D. B. HARMONY, Rear-Admiral, U. S. Navy, Chairman. April 9.

PROPOSALS FOR DREDGING. U. S. Engineer Office, Grand Rapids, Mich., March 28, 1891. Sealed proposals, in triplicate, will be received at this office until noon of April 28,1891, for dredging in Manistee River and Harbor, Mich. The quantity of material to be removed is between 50,000 and 60,000 cubic yards. Attention is invited to Acts of Congress approved February 26, 1885, and February 23, 1887, vol. 23, page 332, and vol. 24, page 414, Statutes at Large. The government reserves the right to reject any or all proposals. For information, specifications, etc., address as above. WILLIAM LUDLOW, Major, Corps of Engineers, Bvt. Lieut. Col. U. S. A. Apr. 23

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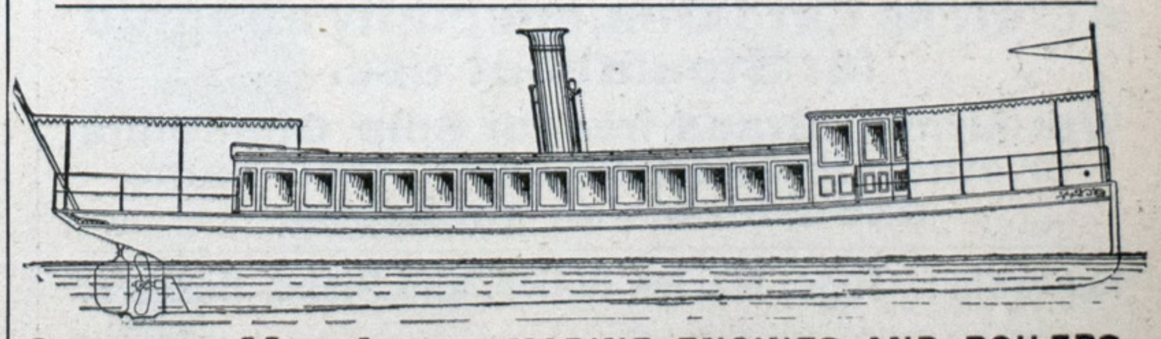

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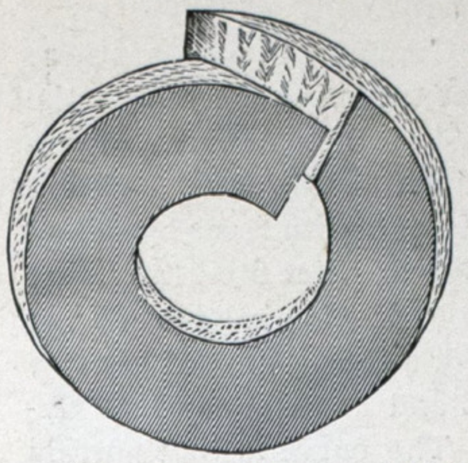

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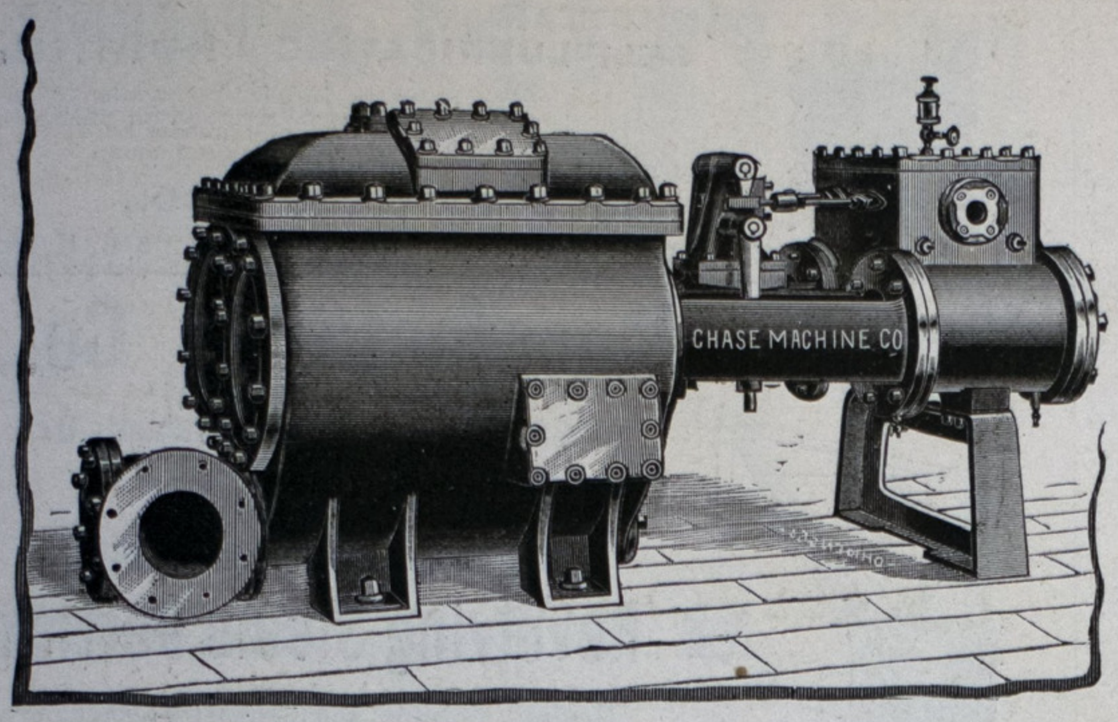

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GENTLEMEN: I had occasion on the 13th of November to use your Extinguisher on board the steamer Queen of the West, of Cleveland. A large lamp used for signal purposes aft, fell about twenty feet and set fire to the whole roof of the engine room. I do not know what the consequences would have been but for the prompt and effectual way in which your extinguisher put out the fire, as the wind was blowing hard and a heavy sea running at the time. I heartily recommend your machine as a fire extinguisher on all classes of steamships. Yours truly,

JOS. A. NICOLSEN, Master Str. Queen of the West.

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MILLER CHEMICAL ENGINE CO. Detroit, Mich., Jan 12, 1891.

DEAR SIRS: Going up Lake Huron last fall during a heavy gale of wind and a big sea running, a fire broke out in one of the rooms of the steamer Fayette Brown, through the accidental upsetting of a lamp among some papers, and had gained considerable headway before discovered. By the prompt use of one of your Chemical Engines it was quickly subdued, and I think there was less than a pint of the fluid used. Have no doubt the fire would have given us lots of trouble without some such prompt and easy way of extinguishing it. Since that time I do not think a steamboat properly fitted out without the Miller Chemical Engine.

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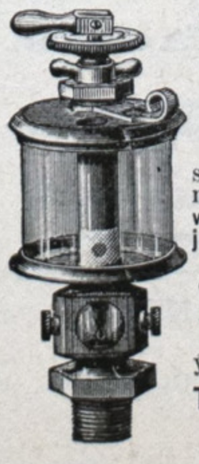

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PROPOSAL FOR EXTENSION OF BREAKwater, at Buffalo Harbor. U. S. Engineer Office, Buffalo, N. Y., March 5th, 1891. Sealed proposals, in duplicate, for furnishing materials and building about 500 feet, more or less, of extension of the Breakwater at Buffalo Harbor, N.Y., will be received at this office until 2 p.m., on the 4th day of April, 1891, and opened immediately thereafter in the presence of bidders. The attention of bidders is invited to acts of Congress, of February 26th, 1885, and February 23d, 1887, vol. 23, page 332, and vol. 24, page 414, Statutes at Large. Preference will be given to articles of domestic production or manufacture, conditions of quality and price (import duties included) being equal. Specifications, general instructions to bidders and blank forms of proposal, or necessary information, will be furnished on application to this office. The United States reserves the right to reject any or all proposals. AMOS. STICKNEY, Major of Engineers, U.S.A. Apr. 2.

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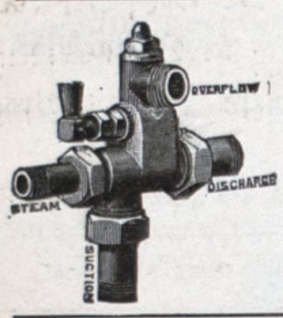

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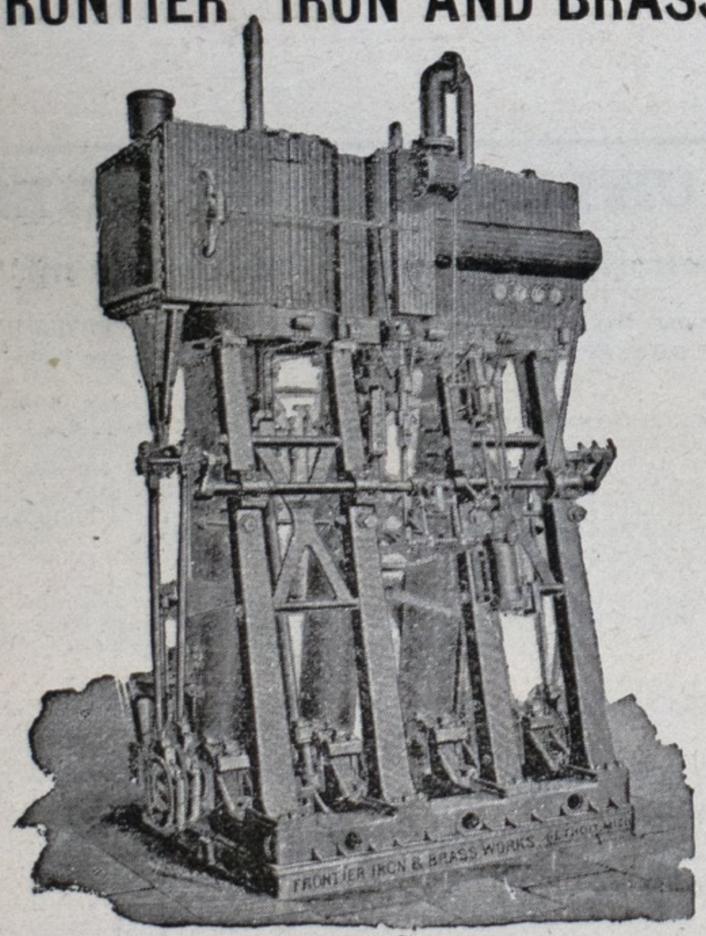

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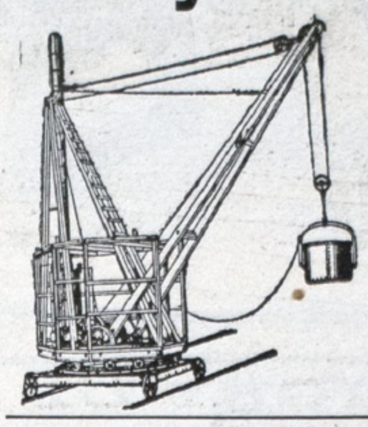

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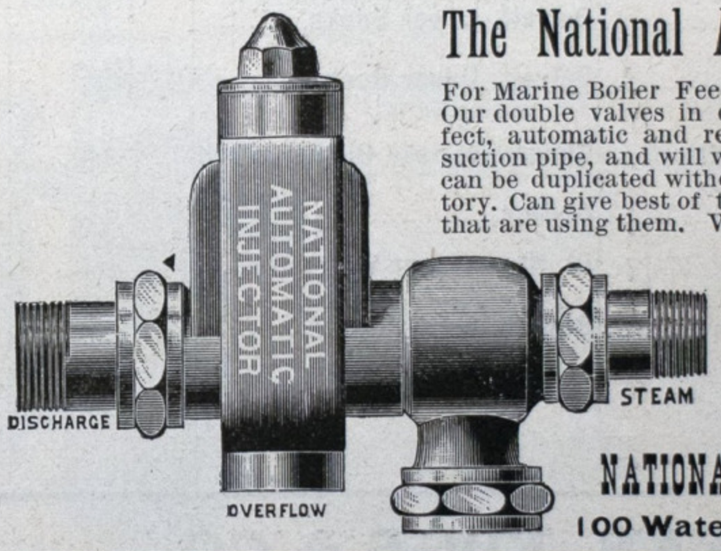

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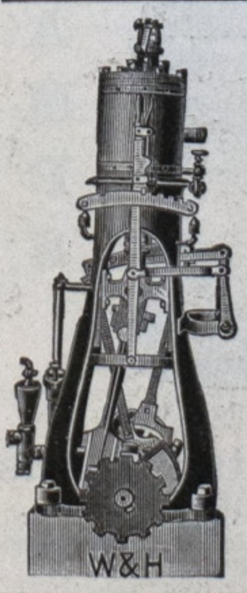

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